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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,188	10/28/2003	Daniel Warren	W016 P00739-US1	9174

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EXAMINER

BRINSON, PATRICK F

ART UNIT	PAPER NUMBER
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3752

DATE MAILED: 05/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/695,188

Applicant(s)

WARREN, DANIEL

Examiner

Patrick F. Brinson

Art Unit

3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: Claim 1 recites “first and second thermosetting resins”. The term “thermosetting” is not provided with antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 5-7 and 10 are rejected under 35 U.S.C. 102(a) as being anticipated by International Publication No. WO 97/084847 to **Barry**.

The **Barry** reference discloses a method of installing a liner in an underground pipeline including the steps of 1) applying a first water resistant adhesive coating (16) to the interior surface of the pipeline, and 2) placing a lining hose (5), in a collapsed state within the pipeline. The lining having an inner and outer layer and impregnated with a cold curable resin. The liner inner layer is a made, for example, of a non-woven fibrous material, such as felt formed from interlocked polyester with a thin membrane of polyurethane formed on the

outer surface of the felt, as recited in claims 5-7. 3) Placing a calibration hose or bladder (7) within the lining hose, and 4) introducing compressed air into the calibration hose or bladder (7), as recited in claim 10, and in doing so 5) pressing the calibration hose against the inner layer of the lining hose and communicating with the second resin. This also will result in 6) pressing the lining hose against the interior of the pipeline with the first resin residing therebetween to cure the first and second resins so that the lining hose bonds to the interior surface of the pipeline.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Barry**.

The patent to **Barry** does not disclose the material of which the calibration hose is made nor the thickness of the first resin. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in

the art to form the calibration hose of vinyl and to apply the first resin layer to a thickness of an 1/8th of an inch because Applicant has not disclosed that either of these limitations provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the material of the bladder disclosed by **Barry**, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice, and to provide a layer of resin of sufficient thickness so as to adhere the liner to the pipeline. Therefore, it would have been an obvious matter of design choice to modify the method of **Barry** to obtain the invention as specified in claims 15 and 20.

6. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Barry** in view of US 5,653,555 to **Catallo**.

The **Barry** reference discloses the method of the present invention, but does not disclose the first and second resins being epoxy resins. The patent to **Catallo '555** discloses a liner hose (4) and a calibration hose wherein the liner hose includes apertures (10) through which a first structural epoxy resin flows to the interior surface of the pipeline to adhere the lining tube to the pipe. A second resin is provided on the inner resin absorbent layer. The second resin

should be a corrosion resistant resin, capable of retaining substantial impermeability to liquid in spite of contact with corrosive chemicals. Col. 4, lines 45-47 recite that the calibration hose contains an epoxy vinyl ester and col. 5, 2nd full paragraph state that the epoxy used for the first resin is a high strength resin, including polyester and urethane. It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute for the adhesive and resin used to attach the lining tube to the pipeline and to protect the pipeline of **Barry** with epoxy resins as taught by **Catallo '555** wherein it is known that these resins provide excellent adhesion of the liners to the pipelines, as well as providing excellent chemical resistance to materials within pipelines.

7. Claims 8, 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Barry** in view of US 5,680,885 to **Catallo**.

The **Barry** reference discloses the method of the present invention, but does not disclose the step of pressing the calibration hose against the lining hose including inverting the calibration hose. The patent to **Catallo '885** discloses a method of rehabilitating pipelines including providing a liner (4) in a collapsed position, and inserting calibration hose (12) into the liner. The calibration hose being connected with inversion pipe (13) and as result of the introduction of

water into the inversion pipe, the calibration hose is inverted and expanded by the water and becomes gradually and progressively displaced away from the region of attachment to inversion pipe (3), as recited in claims 8 and 9.

Additionally, claim 6 of the **Catallo '885** reference discloses the use of steam to expand the calibration hose. The calibration hose presses the lining hose against the interior surface of the pipeline, and the lining hose is cured to the pipeline. It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute for the step of merely inserting a bladder into the liner of **Barry**, the step of inverting the calibration hose with water or steam, as taught by **Catallo '855** wherein this step is shown in the art as an alternate form of pressing the liner onto the pipe wall without wrinkles or ridges.

8. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Barry** in view of **Zenbayashi et al.**

The **Barry** reference does not disclose the temperature at which the pressurized fluid is heated to cure the liner. The patent to **Zenbayashi et al.** discloses a method for lining pipes and col. 7 discloses that steam or hot water may pass through the pipe at 90°C. / 194°F. Col. 8, lines 8 and 9, discloses that an optimum temperature range of 60-70°C. / 140-158°F. was maintained along

the length of the pipeline. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the steam utilized in the calibration tube of **Barry** at a temperature of at least 130°F. as suggested by **Zenbayashi et al.** in order to expedite the curing time of the resin and adhere the liner to the pipeline.

9. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Barry** in view of US 6,703,091 to **Walker**.

The **Barry** reference discloses all of the recited steps in the method of lining a pipeline, but does not disclose how the pipeline is cleaned. The patent to **Walker** discloses a method of lining a pipeline and discloses the steps of cleaning the interior surface of the pipeline by hydro blasting. It is also disclosed, col. 4, lines 14 and 15, that in some cases, higher pressure, detergents, steam solvents or abrasives may be required. It would have been obvious to one having ordinary skill in the art at the time the invention was made to clean the interior surface of the pipeline of **Barry** with water, air, steam or one of several known methods, as taught by **Walker** in order to clean and remove loose and latent concrete, dirt, oil etc. from the interior of the pipeline in order to provide a clean surface to which a lining tube may be adhered.

10. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Barry** in view of US 6,539,979 to **Driver**.

The **Barry** reference discloses the recited steps of lining a pipeline, but does not disclose the length of time the pressurized fluid is maintained within the calibration hose. The patent to **Driver** discloses a method of lining pipelines, in which it's disclosed. Col. 7, lines 31-41, that in conventional pull and inflate installation process utilizing water eversion process, pressure is maintained within the bladder and cure is initiated by exposing the impregnated liner to heat, usually accomplished by introducing heated water through the everting bladder. Generally, cure takes between 3 and 5 hours depending on the type of resin. It would have been obvious to one having ordinary skill in the art at the time the invention was made to maintain the pressurized fluid in the bladder of **Barry** 4-36 hours, as suggested by **Driver** wherein it is known that depending on the type of resin utilized, the heated pressurized fluid may need to continuously maintain the bladder against the liner tube in order to cure the resin.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Patrick F. Brinson** whose telephone number is (703) 308-0111. The examiner can normally be reached on M-F 7:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Michael Y. Mar** can be reached on (703) 308-2087. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Patrick F. Brinson
Primary Examiner
Art Unit 3752

P. F. Brinson
May 27, 2004